

Date: Wednesday, 1/11/2006 4:25:51 PM
 User: Kim Johnston

Process Sheet

③

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : BAR
 Job Number : 25459
 Estimate Number : 10390
 P.O. Number : NIA Part Number : D3197041
 This Issue : 1/11/2006 S.O. No. : NIA Drawing Number : D3197 REV A1
 Prsht Rev. : NC Project Number : N/A
 First Issue : NIA Type : MACHINED PARTS Drawing Revision : A1
 Previous Run : 25250 Material : NIA
 Due Date : 1/31/2006 Qty: 20 Um: Each
 Written By : SEE COMMENT BELOW
 Checked & Approved By : SEE ABOVE DATE & USER
 Comment : Est Rev: A New Issue 05-11-08 JLM

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M7075T73R1000 7075-T73 Round Bar 1" OD



Comment: Qty.: 2.5410 f(s)/Unit Total: 50.8200 f(s)
 Material: 7075-T73 (QQ-A-200/11) or (QQ-A-225/9) 1" OD
 (M7075T73R1.000)
 Identify for D3197-1
 Batch: M100068

mk 06/02/19

20

2.0 BAND SAW BAND SAW



Comment: BAND SAW
 Cut blanks: 29.125" long

mk 06/02/19

20

3.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1
 1-Face ends to length per dwg D3197
 2-Machine D3197-1 as per Folio FA340 and Dwg D3197
 3-Deburr

mk 06/02/19

20

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

mk 06/02/19

20

5.0 LATHE CONV. CONVENTIONAL LATHE



Comment: CONVENTIONAL LATHE
 Chamfer as per Dwg D3197

J.F. 06/02/23

20

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
06.02.28	13	Replace the qty(2) DARS-604 with D3489-3-200 Pip pins per preliminary issue of D3489 Rev A, which allows the use of Jergins 80206 pip pins				<i>CP</i> 06.02.28 per QSI042	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: *LD* Date: *02/03/01*
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BAR

Job Number: 25459

Part Number: D3197041

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

M8 06/02/23 20

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

9-m 06-02-27

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

9-m 06-02-27

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

M 06-02-28

80

10.0

D26905

Lanyard ass'y



Comment: Qty.: 4.0000 Each(s)/Unit Total: 80.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 4 D2690-5 Lanyard B25104

40

11.0

D32421

Tag



Comment: Qty.: 2.0000 Each(s)/Unit Total: 40.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3242-1 TAG B25400

12.0

AN960JD10

Washer



Comment: Qty.: 12.0000 Each(s)/Unit Total: 240.0000 Each(s)

Pick:




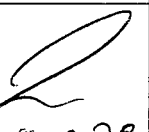
Qty Part Number

Description Batch

6 AN960JD10 Washer M19413

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: LD Date: 06/03/01
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06/02/28	16	1P2690-5 was damaged	 06.03.01 QSI 042	Scrap & replace destroy	06.02.28 SAD	 06.02.28	 06.03.01 per QSI 042	 06.02.28

NOTE: Date & initial all entries

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Drawing Name: BAR

Job Number: 25459

Part Number: D3197041

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

DARS004

Pip Pin



Comment: Qty.: 2.0000 Each(s)/Unit Total: 40.0000 Each(s)

Pick:

Qty Part Number

Description Batch

DARS-004 - Batch# M19507 (10)

2 DARS-004

Pip Pin

JE806-206 Batch# M100069 (30)

14.0

MS21042L3

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total: 80.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 MS21042L3

Nut (or -3)

M1P615

15.0

MS27039124

Screw



Comment: Qty.: 4.0000 Each(s)/Unit Total: 80.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 MS27039-1-24

Screw

M19391

SAD

06:02:28

20

16.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3197-041 as per Dwg D3197

SAD

06:02:28

20

17.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

5 + 137

DOCUMENT CONTROL

19.0

DC



Comment: DOCUMENT CONTROL

Inspection Level 21

DP 06/03/01

u

06-03-01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

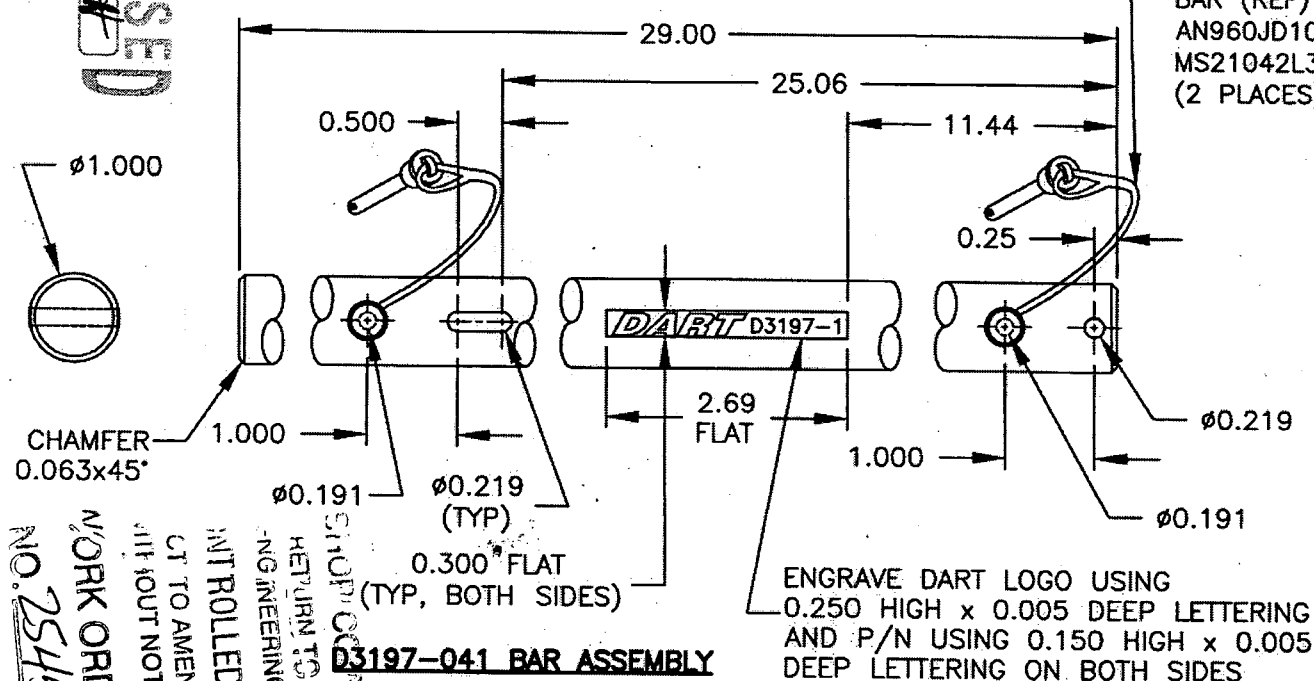
DART



DESIGN	DRAWN BY	DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA	REV. A
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3197	SHEET 1 OF 1
DATE 03.07.01	TITLE BAR	SCALE 1:1	
A	03.07.01	NEW ISSUE	
A1	04.01.12	ADD D3242-1 TAG	

- D3242-1 TAG (1)
- DARS-004 PIP PIN (1)
- MS27039-1-24 BOLT (1)
- AN960JD10 WASHER (1)
- D2690-5 LANYARD (1)
- AN960JD10 WASHER (1)
- BAR (REF)
- AN960JD10 WASHER (1)
- MS21042L3 NUT (1)
- (2 PLACES)

JERGENS 80206
06.02.28



D3197-041 BAR ASSEMBLY

NO. 25459
WORK ORDER
D3197-1
INT ROLLED COIL
CT TO AMEND
WITHOUT NOTICE
RETURN TO
ENGINEERING
SHOP

- 1) MATERIAL: 7075-T73 ROUND BAR (QQ-A-200/11 or QQ-A-225/9) ϕ 1.000 O.D.
(REF DART SPEC. M7075T73R1.000)
- 2) POSSIBLE SUPPLIER FOR DARS-004 PIP PIN: REID TOOL SUPPLY.
IT IS ACCEPTABLE TO REPLACE WITH ANY STAINLESS STEEL DOUBLE-ACTING QUICK-RELEASE PIN WITH A ϕ 0.188 DIAMETER PIN, 1.8"-2.0" GRIP LENGTH, MIN. OF 200 lbs PULL-OUT STRENGTH, AND MIN. OF 5150 lbs DOUBLE SHEAR.
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) FOR TOOLING, IT IS ACCEPTABLE TO HAVE A 0.06 DEEP x 60° CENTER MARK AT EITHER END OF THE BAR

RELEASED
03.10.10

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

[illegible]

Measured by:	<i>ml</i>	Audited by:	<i>J.L</i>	Prototype Approval:	<i>N/A</i>
Date:	<i>06/02/19</i>	Date:	<i>06.02.19</i>	Date:	<i>N/A</i>

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/RF	

PRELIMINARY ISSUE

06.01.28

DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3489	REV. A SHEET 1 OF 1
DATE 06.01.04	TITLE PIP PIN		SCALE NTS
A	06.01.04	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

1) SPECIFICATION: D3489-X-YYY PIP PIN

WHERE 'X' IS THE NOMINAL SIZE IN 1/16THS OF AN INCH
AND 'YYY' IS THE GRIP LENGTH IN TENTHS OF INCHES

FOR EXAMPLE, D3489-3-050 IS 3/16" NOMINAL O.D. WITH 0.50" GRIP

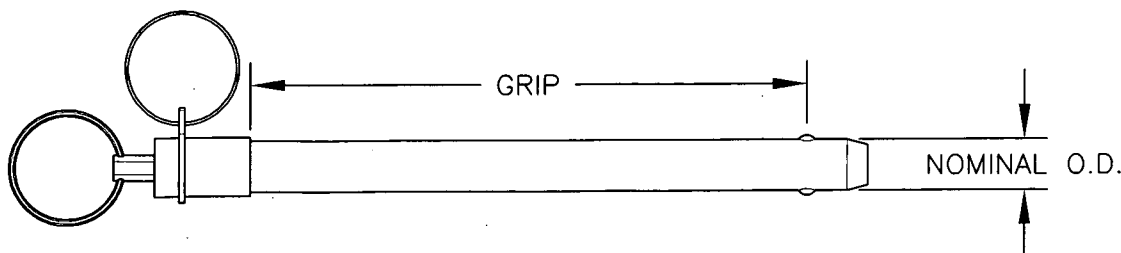
2) ACCEPTABLE SUPPLIERS / PART NUMBERS TO PURCHASE

DART P/N	Nominal O.D.	GRIP	Possible Suppliers	
			JERGENS	REID
D3489-3-050	3/16"	0.50	806200	DARS-000D
D3489-3-075	3/16"	0.75	806201	-
D3489-3-100	3/16"	1.00	806202	DARS-001
D3489-3-125	3/16"	1.25	806203	-
D3489-3-150	3/16"	1.50	806204	-
D3489-3-175	3/16"	1.75	806205	-
D3489-3-200	3/16"	2.00	806206	DARS-004
D3489-3-250	3/16"	2.50	806208	DARS-005
D3489-3-300	3/16"	3.00	806209	-
D3489-4-050	1/4"	0.50	806216	DARS-009
D3489-4-075	1/4"	0.75	806217	-
D3489-4-100	1/4"	1.00	806218	-
D3489-4-125	1/4"	1.25	806219	-
D3489-4-150	1/4"	1.50	806220	DARS-020
D3489-4-175	1/4"	1.75	806221	-
D3489-4-200	1/4"	2.00	806222	DARS-030
D3489-4-250	1/4"	2.50	806224	DARS-035
D3489-4-300	1/4"	3.00	806225	DARS-040
D3489-4-400	1/4"	4.00	808227	DARS-050

3) DESCRIPTION: DOUBLE ACTING, STAINLESS STEEL, QUICK-RELEASE BALL LOCK PINS WITH RING HANDLE

4) MATERIAL: STAINLESS STEEL. MIN. PULL OUT STRENGTH = 200LBS (3/16" PINS) OR 230LBS (1/4" PINS). MIN. DOUBLE SHEAR = 5150LBS (3/16" PINS) OR 9200LBS (1/4" PINS).

5) ALL DIMENSIONS ARE IN INCHES



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Chris Provencal

From: David Shepherd [davids@dartaero.com]
Sent: February 28, 2006 9:35 AM
To: Chris Provencal
Subject: Re: Pip pin substitution.

Go ahead and substitute the Jergens 806206 pip pins into the D3197-041 Bar.

David

----- Original Message -----

From: "Chris Provencal" <cprovencal@dartaero.com>
To: <davids@dartaero.com>
Cc: <bbeckett@dartaero.com>
Sent: Tuesday, February 28, 2006 7:16 AM
Subject: Pip pin substitution.

>
> David,
>
> They need to assemble and ship today shoulder harness kits that use the
> D3197-041 Bar. They need to use Jergens pip pins p/n 806206 instead of
> the
> p/n called up on the dwg (Reid p/n DARS-004). The dwgs are not released
> yet as they are waiting to approval. I would need an email from you
> (David)
> so I can sign off the change on the w/o per QSI 042. I have inspected
> the
> 806206 pip pins myself, and per the signed-off design review #4 of
> D412-702,
> they are identical in form and strength to DARS-004 pip pins.
>
> Bill, I'm sending this to your email as well in case David doesn't have
> access to his email.
>
> Sincerely,
> Chris Provencal
> DART Aerospace Ltd.
> Email..cprovencal@dartaero.com
> Phone...613-632-3336
> Fax.....613-632-4443
>
>